

Genetics MCQ Question Answer

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Question: 1. The scientists who rediscovered the Mendel's laws are

- Option A. Mast and Pantin
- Option B. Watson and Crick
- Option C. Corren, Tschermark and Hugo de Vries
- Option D. Khorana and Nirenberg

Question: 2. The chromosomal theory of heredity implies that

- Option A. chromosomes are composed of DNA and protein
- Option B. genes are composed of chromosomes
- Option C. organism cannot live without chromosomes
- Option D. genes are located on the chromosomes and are transmitted to the next generation through them.

Question: 3. Colour blindness is caused due to

- Option A. deficiency of vitamin C
- Option B. sex-linked abnormality
- Option C. absence of rods in retina
- Option D. absence of visual purple in retina

Question: 4. In a monohybrid cross the F₁ ratio of a backcross is

- Option A. 1:1
- Option B. 3:1
- Option C. 1:2:1
- Option D. 9:3:3:3

Question: 5. Among the following which is a test cross?

- Option A. Tt × Tt
- Option B. TT × TT
- Option C. TT × Tt
- Option D. Tt × tt

Question: 6. The crossing of a homozygous tall plant with a dwarf would yield plants in the ratio of

- Option A. all heterozygous tall
- Option B. two tall and two dwarf
- Option C. one homozygous tall, two heterozygous tall and one homozygous dwarf
- Option D. all homozygous dwarf.

Question: 7. How many meiosis will be required to produce 102 pollen-grains ?

- Option A. 25
- Option B. 25.6
- Option C. 26
- Option D. 26.5

Question: 8. DNA duplication occurs in

- Option A. meiosis only
- Option B. meiosis II and mitosis
- Option C. mitosis only
- Option D. meiosis I and mitosis

Question: 9. A giant chromosome having many chromo-nemata lying side by side all along their length is called

- Option A. megachromosome
- Option B. heterosome
- Option C. polytene chromosome
- Option D. super numerary chromosome

Question: 10. Base substitutions from base analogues I are called

- Option A. transitions
- Option B. transversions
- Option C. intragenic complementation
- Option D. intergenic complementation

Question: 11. Transfer of a gene or genes through a virus is called

- Option A. transformation
- Option B. transduction
- Option C. genetic engineering
- Option D. sex-duction

Question: 12. Which one of the following chemical characteristics is not common to all living beings ?

- Option A. Similar triplet codes for amino acids
- Option B. Energy is stored by high energy rich phosphate bonds
- Option C. Types of protein present in the body.
- Option D. Ribosomes act at sites of protein synthesis

Question: 13. A colour-blind man marries the daughter of a colour-blind person. In their progeny

- Option A. none of her daughters are colour-blind
- Option B. all her sons are colour-blind
- Option C. all her daughters are colour-blind

Option D. half of her sons are colour-blind

Question: 14. The condition in which only one allele of a pair is present is known as

Option A. Homozygous

Option B. Heterozygous

Option C. Hemizygous

Option D. Incomplete dominance

Question: 15. The genetic constitution of an organism is known as

Option A. Genome

Option B. Genepool

Option C. Genotype

Option D. Phenotype

Question: 16. In humans, an example of sex-linked trait is

Option A. Curly hair

Option B. Sickle-cell anaemia

Option C. Colour-blindness

Option D. Down's syndrome

Question: 17. Down's syndrome is an example of

Option A. monosomy

Option B. trisomy

Option C. triploidy

Option D. polyploidy

Question: 18. Which disease results from the genetic inability to synthesize a single enzyme ?

Option A. Diabetes

Option B. Phenylketonuria

Option C. Colour-blindness

Option D. Down's syndrome

Question: 19. Mutations which are not dominant are not lost by a gene pool. This is known as

Option A. Survival of the dominant

Option B. Survival of the recessive

Option C. Hardy-Weinberg law

Option D. None of these

Question: 20. When two genes are situated very close to each other in a chromosome

Option A. the percentage of crossing over between them is high

Option B. hardly any cross-overs detected

Option C. no crossing-over can ever take place between them

Option D. only double cross overs can take place between them.

Question: 21. A person meets with an accident and great loss of blood has occurred. There is no time to analyse his blood group. It is safe to transfuse blood of

Option A. AB, RH⁺

Option B. AB, RH⁻

Option C. O, RH⁻

Option D. O, RH⁺

Question: 22. A chemical mutagen is

Option A. X-rays

Option B. UV-rays

Option C. β -rays

Option D. 5-Bromo-Uracil

Question: 23. If an individual does not breed true for its characters, it is called

Option A. homozygote

Option B. allelomorph

Option C. hybrid

Option D. ecotype

Question: 24. The number of characters investigated by Mendel was

Option A. four

Option B. seven

Option C. six

Option D. one

Question: 25. The science dealing with study of inheritance and variation is

Option A. Genetics

Option B. Evolution

Option C. Morphology

Option D. Cytology

Question: 26. The first person to induce mutations was

Option A. Hugo de Vries

Option B. T.H. Morgan

Option C. Sturtevant

Option D. H.J. Muller

Question: 27. A codon is a sequence of 3 nucleotides on

Option A. t-RNA

Option B. m-RNA

Option C. s-RNA

Option D. hn-RNA

Question: 28. In the Operon concept, the regulator gene regulates chemical reactions in the cell by

Option A. inhibiting transcription of m-RNA

Option B. inactivating enzymes in the reaction

Option C. inhibiting the substrate in the reaction

Option D. inhibiting the migration of m-RNA into cytoplasm

Question: 29. The possibilities of hereditary and evolutionary changes are greatest in species that reproduce by

Option A. fission

Option B. budding

Option C. asexual means

Option D. sexual means

Question: 30. An offspring of two homozygous parents different from one another by alleles at only one gene locus is known as

Option A. monohybrid

Option B. dihybrid

Option C. trihybrid

Option D. backcross

Answer Sheet

1	C	
2	D	
3	B	
4	A	
5	D	
6	C	
7	C	
8	D	
9	C	
10	A	
11	B	
12	C	
13	D	
14	C	
15	A	
16	C	
17	B	
18	B	
19	C	
20	C	
21	C	
22	D	
23	C	
24	B	
25	A	
26	D	
27	B	
28	A	
29	D	